

IN THE CLAIMS:

Claims 1-2 (cancelled).

Cl 3. (currently amended) A method ~~of~~ for eliminating the use of an auxiliary cooling fan and cooling a motor of a blower assembly used to expel exhaust gases from a furnace, the blower assembly having a motor housing for enclosing the motor and an impeller housing fixed to the motor housing that receives an impeller mounted to a motor shaft of the motor, the method comprising the steps of:

forming at least one vent aperture in the motor housing at an outer end of the motor housing spaced from the impeller housing such that cooling air can enter the motor housing through the vent aperture and pass over the motor;

closely mounting the motor housing to the impeller housing such that cooling air can enter the motor housing only through the vent aperture;

forming an inlet port between the motor housing and the impeller housing such that cooling air can enter the impeller housing from the motor housing only through the inlet port;

forming at least one aperture in a back plate of the impeller such that cooling air can pass through the back plate of the impeller; and

rotating the impeller to both draw cooling air into the motor ~~impeller~~ housing through the vent aperture formed at the outer end of ~~in~~ the motor housing such that the cooling air is drawn over the motor and into the impeller housing to cool the motor and to draw exhaust gases into the impeller housing from the furnace, wherein the rotating impeller expels the cooling air and the exhaust gas from the impeller housing.

Claim 4 (cancelled).

5. (previously amended) The method of claim 3 wherein the motor housing is secured to the impeller housing.

C2
6. (currently amended) The method of claim 3 wherein the motor shaft passes through the inlet opening between the motor chamber and the impeller chamber, the inlet opening being sized substantially larger than the motor shaft to permit the desired flow of cooling air through the inlet opening to cool the motor.

7. (currently amended) A furnace blower assembly for expelling exhaust gases from a furnace, the blower assembly being devoid of an auxiliary cooling fan for creating a flow of cooling air, the blower assembly comprising:

a motor having a motor shaft;

a motor housing configured to receive and enclose the motor, the motor housing including at least one vent aperture formed at an outer end of the motor housing for allowing external cooling air to enter the motor housing only through the vent aperture;

an impeller housing closely mounted to the motor housing, the impeller housing including an inlet port for providing fluid communication between the impeller housing and the motor housing, wherein the external cooling air can enter the motor housing only through the vent aperture when the motor housing is closely mounted to the impeller housing; and

an impeller enclosed within the impeller housing and mounted to the motor shaft for rotation with the motor shaft, the impeller having a back plate and a plurality of fins, wherein the back plate includes a plurality of apertures, wherein the blower assembly includes only one impeller such that rotation of the single impeller both draws cooling air into the motor housing only through the vent aperture such that the cooling air flows over the motor, through the inlet opening and into the impeller housing from the motor housing for cooling the motor and draws the exhaust gases from the furnace into the impeller chamber.

8. (currently amended) The furnace blower assembly of claim 7 wherein the motor housing is closely connected to the impeller housing such that

C2 cooling air can enter the motor housing through only the vent aperture formed in the motor housing.

Claim 9 (cancelled).

C3 10. (currently amended) The furnace blower assembly of claim 7 wherein the motor shaft extends through the inlet port and the inlet port is sized substantially larger than the motor shaft to permit the desired flow of cooling air through the inlet opening to cool the motor.

11. (previously amended) The furnace blower assembly of claim 7 wherein the apertures formed in the back plate of the impeller allow the cooling air to pass through the back plate.

12. (previously amended) The furnace blower assembly of claim 7 wherein the impeller housing includes an outlet pipe such that rotation of the impeller expels the exhaust gases and the cooling air from the impeller housing through the outlet pipe.